



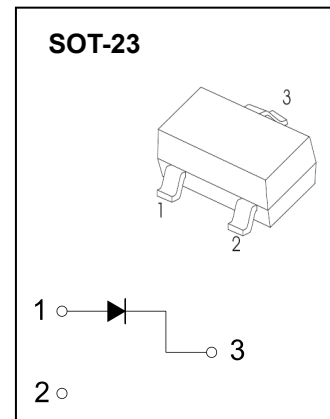
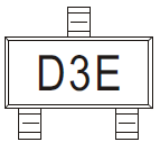
## SOT-23 Plastic-Encapsulate Diodes

### RB411D SCHOTTKY BARRIER DIODE

#### FEATURES

- Small Surface Mounting Type
- Low Reverse Current and Low Forward Voltage
- High Reliability

Marking: D3E



#### Maximum Ratings(Ta=25°C unless otherwise noted)

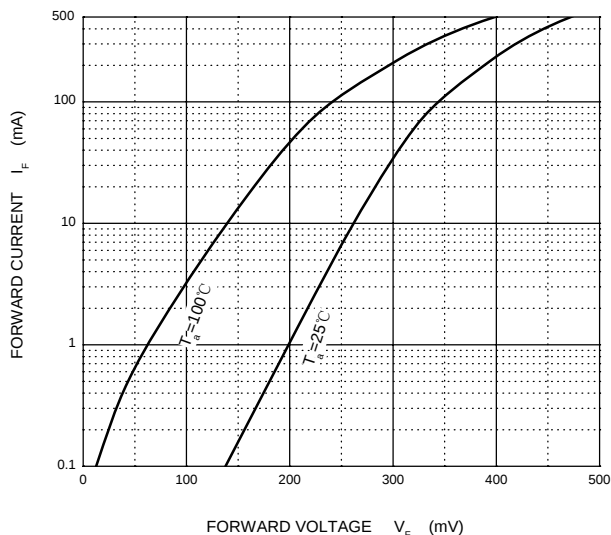
| Parameter                                         | Symbol          | Limit    | Unit |
|---------------------------------------------------|-----------------|----------|------|
| Peak repetitive reverse voltage                   | $V_{RM}$        | 40       | V    |
| RMS reverse voltage                               | $V_{R(RMS)}$    | 28       | V    |
| DC reverse voltage                                | $V_R$           | 20       | V    |
| Mean rectifying output current                    | $I_O$           | 500      | mA   |
| Non-repetitive Peak Forward Surge Current@t=8.3ms | $I_{FSM}$       | 3        | A    |
| Power Dissipation                                 | $P_D$           | 200      | mW   |
| Thermal Resistance Junction to Ambient            | $R_{\theta JA}$ | 500      | °C/W |
| Junction temperature                              | $T_j$           | 125      | °C   |
| Storage temperature                               | $T_{stg}$       | -55~+150 | °C   |

#### Electrical Ratings @Ta=25°C

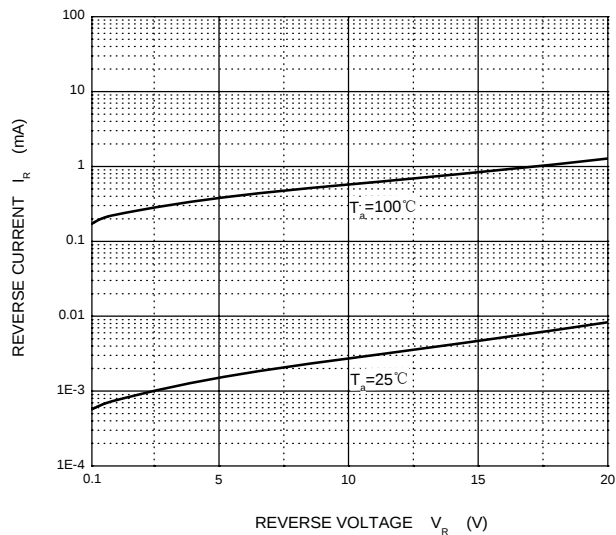
| Parameter                     | Symbol   | Min. | Typ. | Max. | Unit    | Condition         |
|-------------------------------|----------|------|------|------|---------|-------------------|
| Reverse breakdown voltage     | $V_R$    | 20   |      |      | V       | $I_R=100\mu A$    |
| Forward voltage               | $V_{F1}$ |      |      | 0.3  | V       | $I_F=10mA$        |
|                               | $V_{F2}$ |      |      | 0.5  | V       | $I_F=500mA$       |
| Reverse current               | $I_R$    |      |      | 30   | $\mu A$ | $V_R=10V$         |
| Capacitance between terminals | $C_T$    |      | 20   |      | pF      | $V_R=10V, f=1MHz$ |

# Typical Characteristics

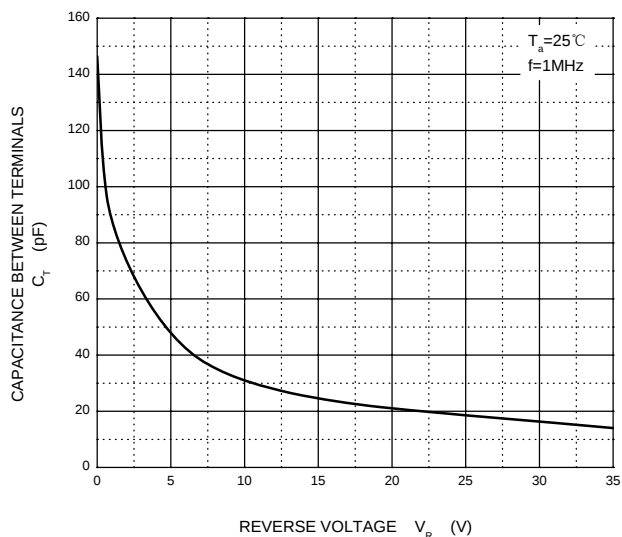
Forward Characteristics



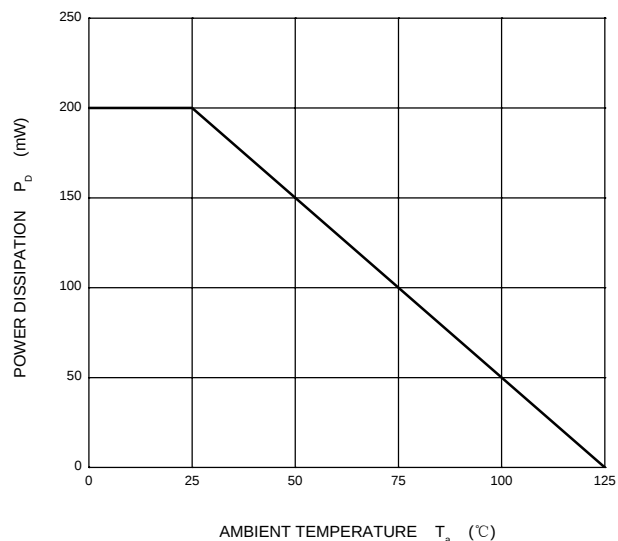
Reverse Characteristics



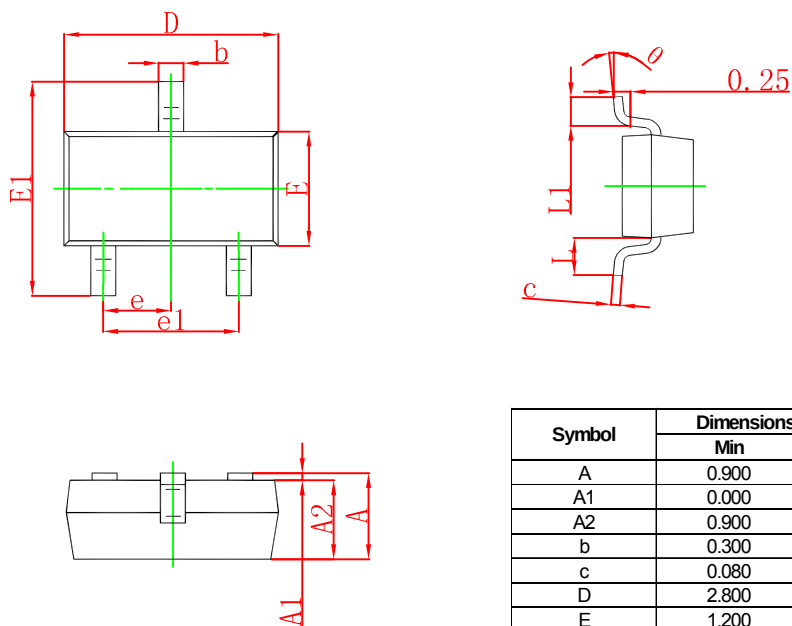
Capacitance Characteristics



Power Derating Curve

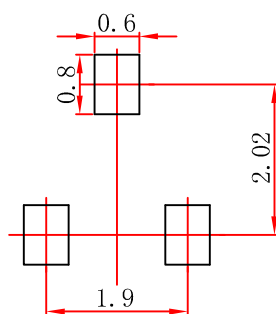


## SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950 TYP                 |       | 0.037 TYP            |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550 REF                 |       | 0.022 REF            |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

## SOT-23 Suggested Pad Layout

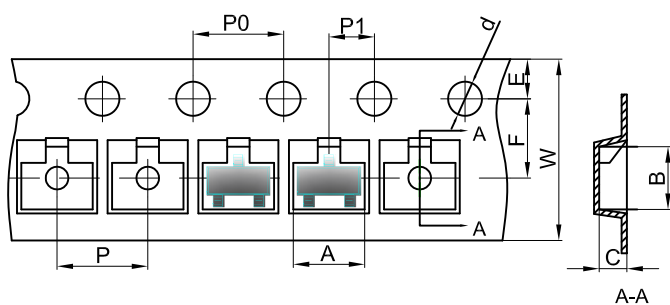


Note:  
 1. Controlling dimension: in millimeters.  
 2. General tolerance:  $\pm 0.05$  mm.  
 3. The pad layout is for reference purposes only.

### NOTICE

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

SOT-23 Embossed Carrier Tape

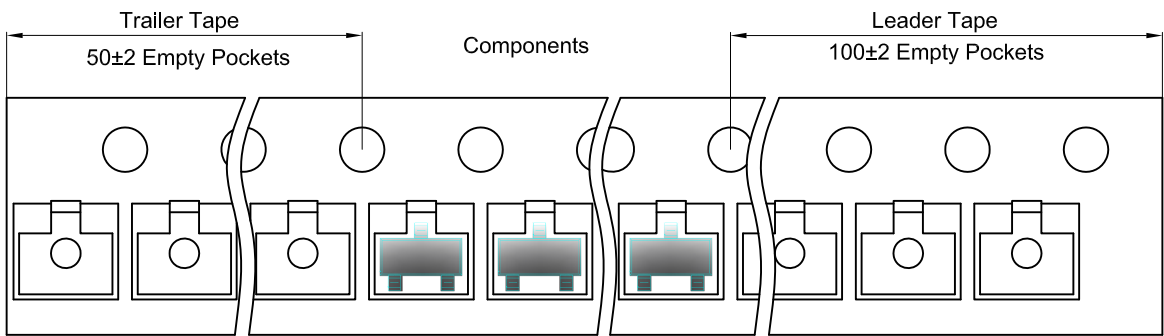


Packaging Description:

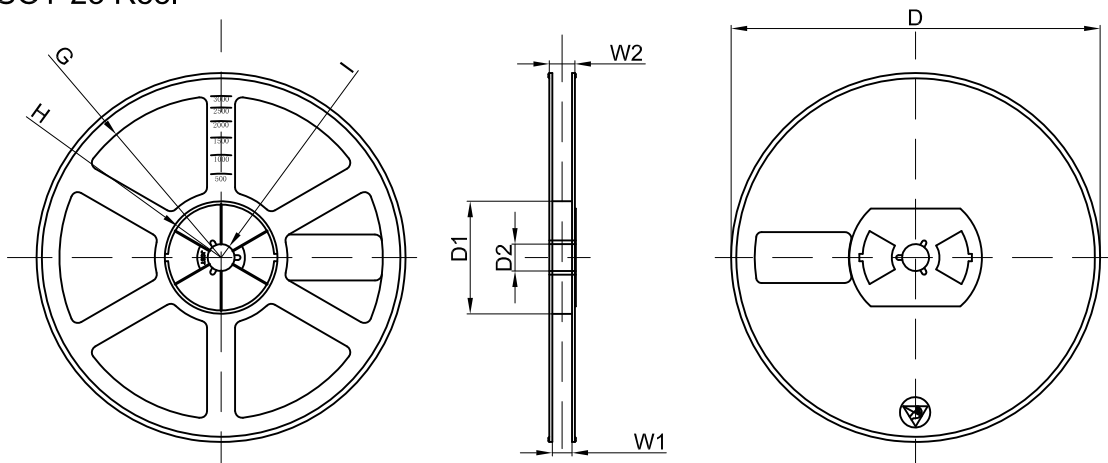
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

| Dimensions are in millimeter |      |      |      |       |      |      |      |      |      |      |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type                     | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOT-23                       | 3.15 | 2.77 | 1.22 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOT-23 Tape Leader and Trailer



SOT-23 Reel



| Dimensions are in millimeter |         |       |       |        |        |       |      |       |
|------------------------------|---------|-------|-------|--------|--------|-------|------|-------|
| Reel Option                  | D       | D1    | D2    | G      | H      | I     | W1   | W2    |
| 7"Dia                        | Ø178.00 | 54.40 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

| REEL     | Reel Size | Box        | Box Size(mm) | Carton      | Carton Size(mm) | G.W.(kg) |
|----------|-----------|------------|--------------|-------------|-----------------|----------|
| 3000 pcs | 7 inch    | 45,000 pcs | 203×203×195  | 180,000 pcs | 438×438×220     |          |